ASTROPHYSICS MINOR

Introduction

Please click here (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/physics/) to see Physics department information.

Astrophysics is an important and well-represented subdiscipline of physics. It includes the study of the solar system, galactic and extragalactic astrophysics, as well as cosmology. A minor in this field combines a theoretical approach with observational analysis. There is also the opportunity to do research in this field.

The physics department offers minors in physics, biophysics, and astrophysics. However, it is not possible to receive a minor in more than one of these fields. Also, physics majors may elect to receive the astrophysics or biophysics minor from the department, but not the physics minor.

Students are strongly encouraged to consult with the astrophysics advisor, meet physics faculty engaged in Astrophysics research, attend departmental astrophysics-related seminars, and explore ways that astrophysics relates to research undertaken by faculty in other disciplines.

For more information, contact:

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These program requirements are subject to periodic revision by the academic department, and the College of Liberal Arts and Sciences reserves the right to make exceptions and substitutions as judged necessary in individual cases. Therefore, the College strongly urges students to consult regularly with their major, minor and CLAS advisors to confirm the best plans of study before finalizing them.

Program Delivery

- This is an on-campus program.

Declaring This Minor

- Click here (http://catalog.ucdenver.edu/cu-denver/undergraduate/schools-colleges-departments/college-liberal-arts-sciences/#policiestext) to go to information about declaring a minor.

General Requirements

Students must satisfy all requirements as outlined below and by the department offering the minor.

- Click here (http://catalog.ucdenver.edu/cu-denver/undergraduate/academic-policies-procedures/) for information about Academic Policies

Program Requirements

1. Students must complete a minimum of 16 PHYS credit hours.
2. Students must complete a minimum of six upper-division (3000-level and above) PHYS credit hours.
3. Students must earn a minimum grade of C- (1.7) in all courses that apply to the minor and must achieve a minimum cumulative minor GPA of 2.0. All graded attempts in required and elective courses are calculated in the minor GPA. Courses taken using P+/P/F or S/U grading cannot apply to minor requirements.
4. Students must complete a minimum of nine PHYS credit hours with CU Denver faculty.

Program Restrictions, Allowances and Recommendations

1. Requirements for the minor in astrophysics may be used to fulfill the requirements of the major in physics.
2. A student majoring in physics who wants to minor in astrophysics cannot use the 3000-level and above courses applied to the Astrophysics minor for their Physics Major requirements.
3. A student seeking a minor in astrophysics who also wants to minor in physics or biophysics can only use one of the 3000-level and above courses applied to the Astrophysics minor for their Physics Minor or Biophysics Minor requirements.

Code	Title	Hours
Complete the following Introductory Physics Lecture/Lab Courses:		*10*
PHYS 2010	College Physics I	
or PHYS 2311	General Physics I: Calculus-Based	
PHYS 2321	Intro Experimental Phys Lab I	
or PHYS 2351	Applied Physics Lab I	
PHYS 2020	College Physics II	
or PHYS 2331	General Physics II: Calculus-Based	
PHYS 2341	Intro Experimental Phys Lab II	
or PHYS 2361	Applied Physics Lab II	
Complete a minimum of six credit hours from the following Upper Division Astrophysics Elective credit [1]		*6*
PHYS 3050	General Astronomy II	
PHYS 3070	Physical Cosmology	
PHYS 3082	Energy and the Environment	
PHYS 3411	Thermal Physics	
PHYS 3840	Independent Study: PHYS [2]	
PHYS 3880	Directed Research [2]	
PHYS 3939	Internship [2]	
PHYS 4510	Optics	
PHYS 4550	Astrophysics	
PHYS 4840	Independent Study: PHYS [2]	
PHYS 4980	Advanced Physics Topics [2]	
Total Hours		**16**

[1] Students must complete a minimum of six upper-division (3000-level and above) PHYS credit hours. Additional astrophysics-related

special topics or elective courses may be approved by the department advisor. Electives with a prefix other than PHYS may be considered in consultation with your departmental academic advisor and with approval of the physics department chair.

[2] Topics in these classes vary, as do the number of credits that can be earned. See departmental advisor for approval.

To learn more about the Student Learning Outcomes for this program, please visit our website (https://clas.ucdenver.edu/physics/academics/program-learning-goals/).